Engaging Information Systems Students in a Practicum-Based Project: Employers’ Perceptions and Comparison

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ABSTRACT

In a previous study, a practicum-based approach to bridge the gap between industry expectations and Information Systems (IS) graduates’ skills was discussed from the students’ point of view. The practicum project was initiated to enable students to experience real work in the IS domain in accordance with their professional aspirations and their desired specialty. To complete the whole picture, in this article, we present the employers’ point of view as regards to the benefits the students gained from the project and compare between the two points of view. Semi-structured questionnaire and in-depth interviews with employers who participated in the project in the last four years were conducted in order to reveal their perceptions. Many similarities exist between the employers’ and the students’ perceptions but also some differences stemming from different perspectives on the process were found. The employers’ perspectives were discussed and also the differences between the students’; and the employers’; perceptions.

KEYWORDS

Employers’ Expectations, Graduates’ Skills, Independent Learner Skills, Information Systems Education, Knowledge Gaps, Practicum

INTRODUCTION

In the transition between academia and industry in the IS field, there is a gap in the level of readiness of the graduates. In many academic institutions, various projects were initiated to deal with this gap (Clear et al., 2011). These projects have an important role in preparing the future IS workers to the ongoing changing demands of the rapid development of the IS field (Silva, et al., 2016; Sanahuja Ve’lez & Ribes Giner, 2015; Virolainen et al., 2011; Bailey & Stefanizk, 2002). As part of this study, we present and discuss a practicum project addressing this gap. The purpose of this project is to engage students in their last year of studies in industrial work on a one-day-a-week basis. Lavy (2017) presents the practicum framework and discusses in detail the perceived benefits by undergraduate Information Systems (IS) students who participated in the project.

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In this study, we focus on the perspective of the employers who participated in the practicum entrepreneurship as regards to the benefits the students gained from the practicum, and compare them to the students’ perceptions on that matter.

To reveal the employers’ perceptions, 21 participating employers were asked to give their point of view via addressing a semi-structured questionnaire. In addition, in-depth interviews were conducted with six employers representing the different types of firms of the IS domain.

To value the effectiveness of the practicum project, it is important to consider the views of both parties involved - the participating students and employers. In Lavy (2017) the students’ point of view was presented and discussed, and in the current study we present and discuss the employers’ point of view.

THEORETICAL BACKGROUND

This paper presents a brief theoretical background on preparing IS students for vocational careers during academic studies and on industry practicum for IS students.

Preparing IS Students for Vocational Career During Academic Studies

Technical and non-technical skills are key factors in developing successful career in the IS field (Gillard, 2009; Cappel, 2002). During their academic studies, IS students study various courses concerning applied computing and business, and are supposed to be able to identify and analyze problems, design solutions, and implement these designs into a working application (Bishop-Clark, 1995; Lunt et al., 2008). Also, due to the rapid new development in the computing discipline students are expected to learn and apply new technologies with minimal assistance. Furthermore, they have to be able to work as part of a team, as computer applications have become too complex for one programmer to deal with (Hazzan & Kramer, 2007). IS workers who facilitate business activities by introducing and operating information systems, have to possess, in addition to technical skills, oral and writing skills in order to better communicate with peers, users, managers and other stakeholders (Silva, et al., 2016; Sanahuja Ve’lez & Ribes Giner, 2015; Virolainen et al., 2011; Gorgone, et al., 2003; Capretz & Ahmed, 2010). Moreover, the graduates are expected to organize their work efficiently and provide proved products under time constraints and budget limitations (Lilienthal et al., 2005).

One of the activities during a workshop course, in the college where this research took place, includes the specification and the development of a small information system. The instructor “plays” the customer’s role and the teams have to communicate with him to analyze and design the solution, and to present the developed system. Via the course activities, the students have the opportunity to develop oral and writing skills for the communication with their peers. Though the simulation provides the students with a glance of software development in a real work place, it cannot be considered as a substitute to continual experience in the industry.

Industry Practicum for IS Students

Information Systems is an industry-oriented discipline, similar to Computer Science (CS) and Software Engineering (SE). Hence, IS studies should include industrial practice in order to ease their entrance to the world of information systems development. However, many of the skills required to perform in real workplace are not achievable via text books since the lessons cannot be understood as well as they are with experience (Vaughn & Carver, 2006; Begel & Simon, 2008). According to Shaw (2000), universities have long felt the tension between academic studies that emphasizes education in enduring principles and the demands of employers who expect focused training in current technologies. Moreover, Industrial experience in the areas of process focus, team dynamics, planning, performance evaluation, customer management, delivery schedules (time and budget), time accounting, and product delivery should be practiced and not just discussed in class (Vaughn, 2001). In particular, IS graduates are expected to possess both technical and non-technical skills (Lilienthal
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